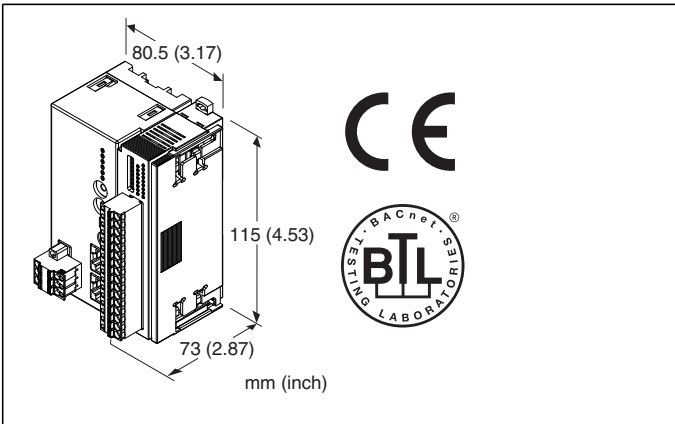


Remote Control / Supervisory System BA8 Series

DISCRETE INPUT & RELAY OUTPUT MODULE, 4 points each
(BACnet/IP)



MODEL: BA8BI-DAC8-M2

ORDERING INFORMATION

- Code number: BA8BI-DAC8-M2

COMMUNICATION TYPE

BI: BACnet/IP

I/O TYPE

DAC8: 4-point dry contact inputs, 4-point relay contact outputs

POWER INPUT

AC Power

M2: 100 - 240 V AC (Operational voltage range 85 - 264 V, 47 - 66 Hz)

GENERAL SPECIFICATIONS

Connection

BACnet IP: RJ-45 Modular Jack

I/O: Tension clamp terminal block

Power input: Tension clamp terminal block

Housing material: Flame-resistant resin (gray)

Isolation: BACnet/IP or FE to contact input to contact output to power

Output Mode: Settable with side DIP switch

Simulated I/O: Settable with front DIP switch

Output: Settable with front DIP switch

Status indicator LEDs: PWR, RUN, ERR

(Refer to the instruction manual for details.)

BACnet COMMUNICATION

Applicable standard:

ANSI/ASHRAE Standard 135-2010

BACnet standard device profile:

BACnet Application Specific Controller (B-ASC)

Number of supported object: 9 max.

Supported object type:

Binary Input, Binary Output, Device, Accumulator

Supported BIBBs:

Data Sharing

Read Property-B (DS-RP-B)

Read Property Multiple-B (DS-RPM-B)

Write Property-B (DS-WP-B)

Write Property Multiple-B (DS-WPM-B)

COV-B (DS-COV-B)

Device Management

Dynamic Device Binding-B (DM-DDB-B)

Dynamic Object Binding-B (DM-DOB-B)

Device Communication Control-B (DM-DCC-B)

Time Synchronization-B (DM-TS-B)

UTC Time Synchronization-B (DM-UTC-B)

Supported data link layer:

MS/TP master (Clause9)

Supported character code:

ISO 10646 (UTF-8)

■ BACnet/IP

Default IP address: 192.168.1.200

Host parts of the IP address is selectable with rotary switch. 00 to FF (00 operates with default IP address, network part is changable with web browser)

Transmission distance: 100 meters max.

INPUT SPECIFICATIONS

Number of input: 4

Isolation: Optical isolator

Input resistance: Approx. 4.4 kΩ

Common: 1 common per 4 points (4 terminals)

Contact detecting: 24 V DC $\pm 10\%$

ON voltage/ON current: ≤ 12 V, ≥ 2.5 mA

OFF voltage/OFF current: ≥ 17 V, ≤ 1.5 mA

ON delay time: ≤ 2.0 msec.

OFF delay time: ≤ 2.0 msec.

ON detecting time: Approx. 5.0 msec.

■ PULSE INPUT SPECIFICATION

Maximum frequency: 100 Hz

(ON/OFF time \geq 5 msec.)

Totalized pulse range: 0 - 4,294,967,295

Max. totalized pulse range: 1,000 - 4,294,967,295

(Factory setting: 9,999,999)

Count at overflow: Reset and restart at '0'.

OUTPUT SPECIFICATIONS

Number of output: 4 points

Common: 1 common per 1 point

Rated load: 250 V AC @ 2A, 30 V DC @ 2A

Maximum switching voltage: 250 V AC, 30 V DC

Maximum switching power: 500 VA (AC), 60 W (DC)

Minimum applicable load: 24 V DC @ 5 mA

Relay life

Mechanical: 2×10^7 cycles (180 cycles per min.)

When driving an inductive load, external contact protection and noise quenching recommended.

ON delay time: \leq 10 msec.

OFF delay time: \leq 10 msec.

Output data update time: Approx. 300 msec.

INSTALLATION

Power consumption

•AC:

Approx. 7 VA at 100 V

Approx. 10 VA at 200 V

Approx. 11 VA at 240 V

Operating temperature: 0 to 50°C (32 to 122°F)

Operating humidity: 10 to 90 %RH (non-condensing)

Atmosphere: No corrosive gas or heavy dust

Mounting: DIN rail

Weight: 330 g (0.73 lb)

PERFORMANCE

Battery backup: RTC (for 7 days max.)

Calendar clock accuracy: Monthly deviation 2 minutes at 25°C

Insulation resistance: \geq 100 M Ω with 500 V DC

Dielectric strength: 1500 V AC @ 1 minute (BACnet/IP or FE to contact input to contact output to power)

STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

Low Voltage Directive

EN 61010-1, EN 61010-2-201

Measurement Category II (contact output)

Installation Category II (power input)

Pollution Degree 2

BACnet/IP or FE to contact input to contact output to power:

Reinforced insulation (300 V)

RoHS Directive

WEB BROWSER CONFIGURATION

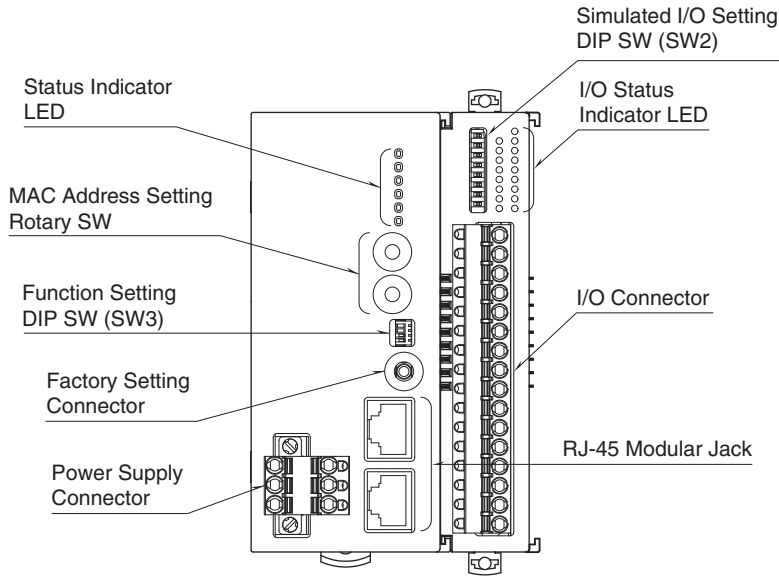
The following parameters can be set with using web browser.

Refer to the "BACnet/IP I/O module (model: BA8BI-DAC8) users manual" for detailed operation of the web browser.

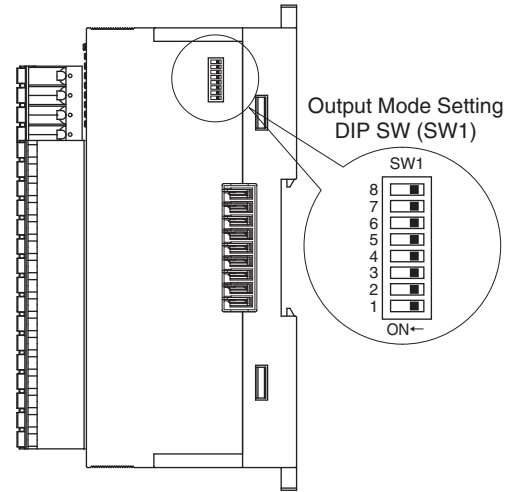
PARAMETER	SETTING RANGE	DEFAULT SETTING
Device Instance No.	0 - 4,194,302	200
BACnet/IP UDP Port	0 - 65,535	47,808
BACnet/IP Network No.	1 - 65,534	1
Register Foreign Device	Disable/Enable	Disable
BBMD IP Address	0.0.0.0 - 255.255.255.255	192.168.1.200
BBMD UPD port No	0 - 65,535	47,808
Re-Register Time (sec.)	1 - 28,800	10
IP Address	0.0.0.0 - 255.255.255.255	192.168.1.200
Subnet Mask	0.0.0.0 - 255.255.255.255	255.255.255.0
Default Gateway	0.0.0.0 - 255.255.255.255	192.168.1.1
Primary DNS	0.0.0.0 - 255.255.255.255	192.168.1.1
Secondary DNS	0.0.0.0 - 255.255.255.255	0.0.0.0
Link Setting	Auto/10M Half/10M Full/100M Half/100M Full	Auto
Oneshot Channel	None/Ch1 + Ch2/Ch3 + Ch4/All	None

EXTERNAL VIEW

FRONT VIEW



SIDE VIEW



CONNECTION DIAGRAMS

Tension clamp terminal blocks are used for I/O and power input.

COMMON SPECIFICATION

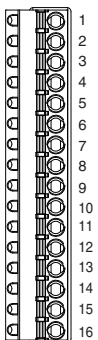
Applicable wire size: 0.2 – 1.5 mm²; stripped length 10 mm

Recommended solderless terminal

- AI0,25-10BU 0.25 mm² (Phoenix Contact)
- AI0,34-10TQ 0.34 mm² (Phoenix Contact)
- AI0,5-10WH 0.5 mm² (Phoenix Contact)
- AI0,75-10GY 0.75 mm² (Phoenix Contact)
- A1-10 1.0 mm² (Phoenix Contact)
- A1,5-10 1.5 mm² (Phoenix Contact)

I/O

Applicable connector: MSTB2,5/16-G (Phoenix Contact) attached to the module



INPUT

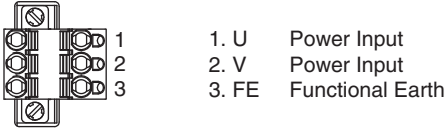
- | | |
|---------------|----------|
| 1. X0 INPUT 0 | 2. C COM |
| 3. X1 INPUT 1 | 4. C COM |
| 5. X2 INPUT 2 | 6. C COM |
| 7. X3 INPUT 3 | 8. C COM |

OUTPUT

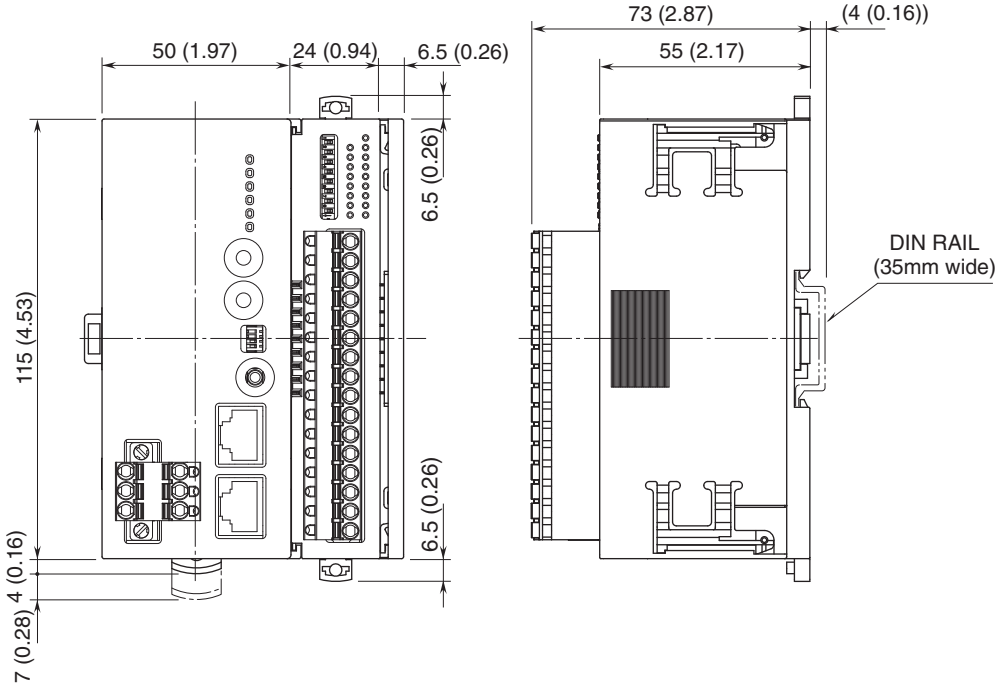
- | | |
|-----------------|------------|
| 9. Y0 OUTPUT 0 | 10. C0 COM |
| 11. Y1 OUTPUT 1 | 12. C1 COM |
| 13. Y2 OUTPUT 2 | 14. C2 COM |
| 15. Y3 OUTPUT 3 | 16. C3 COM |

POWER INPUT

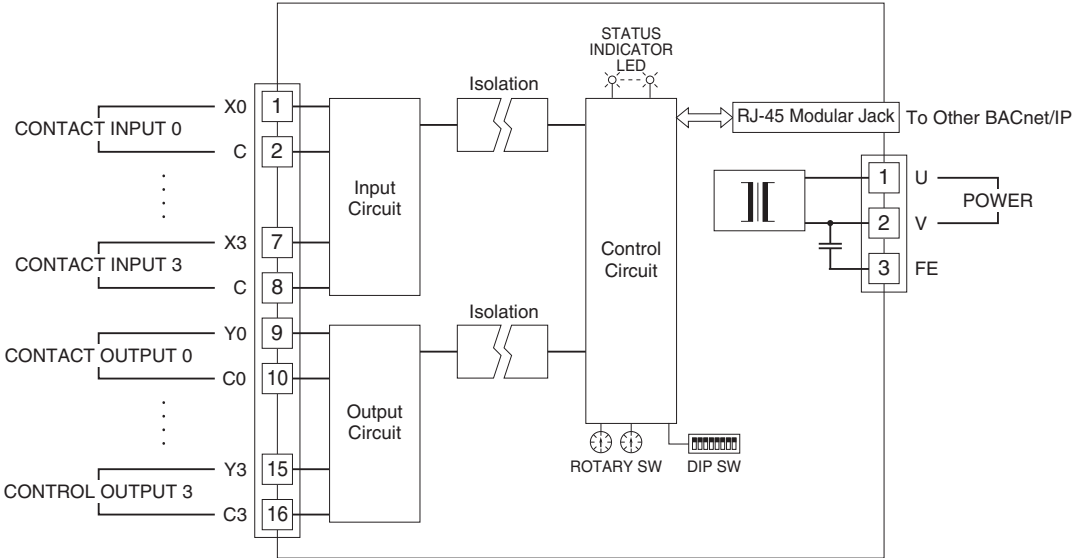
Applicable connector: MSTB2,5/3-GF-5,08 (Phoenix Contact) attached to the module



EXTERNAL DIMENSIONS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM





Specifications are subject to change without notice.